

10/814,826 01/17/2008

=> s 11 and 12 and 13  
25909 L1  
35206 L2  
5 L3  
L4 0 L1 AND L2 AND L3

=> s 11 and 12  
25909 L1  
35206 L2  
L5 364 L1 AND L2

=> s interferon  
80963 INTERFERON  
87669 INTERFERONS  
L6 106089 INTERFERON  
(INTERFERON OR INTERFERONS)

=> s 15 and 16  
L7 18 L5 AND L6

=> d ti 1-18

L7 ANSWER 1 OF 18 CAPLUS COPYRIGHT 2008 ACS on STN  
TI Flux-enabling compositions and methods for dermal delivery of drugs

L7 ANSWER 2 OF 18 CAPLUS COPYRIGHT 2008 ACS on STN  
TI Anti-infective formulation comprising solvent vehicle and solidifying agent

L7 ANSWER 3 OF 18 CAPLUS COPYRIGHT 2008 ACS on STN  
TI Non-volatile solvent-containing composition and method for dermal delivery of drug

L7 ANSWER 4 OF 18 CAPLUS COPYRIGHT 2008 ACS on STN  
TI Spray-on formulations and methods for dermal delivery of drugs

L7 ANSWER 5 OF 18 CAPLUS COPYRIGHT 2008 ACS on STN  
TI Spray-on formulations and methods for dermal delivery of drugs

L7 ANSWER 6 OF 18 CAPLUS COPYRIGHT 2008 ACS on STN  
TI Compositions and methods for treating dermatological conditions

L7 ANSWER 7 OF 18 CAPLUS COPYRIGHT 2008 ACS on STN  
TI Flux-enabling compositions for dermal delivery of drugs

L7 ANSWER 8 OF 18 CAPLUS COPYRIGHT 2008 ACS on STN  
TI Complexation of metal ions with polypeptides

L7 ANSWER 9 OF 18 CAPLUS COPYRIGHT 2008 ACS on STN  
TI Solvent/polymer solutions as suspension vehicles

L7 ANSWER 10 OF 18 CAPLUS COPYRIGHT 2008 ACS on STN  
TI Suspending vehicles and pharmaceutical suspensions for drug dosage forms

L7 ANSWER 11 OF 18 CAPLUS COPYRIGHT 2008 ACS on STN  
TI Non-aqueous formulations containing biodegradable polymers and methionine and solvents for removing peroxides and reducing the oxidative degradation of drugs

10/814,826 01/17/2008

- L7 ANSWER 12 OF 18 CAPLUS COPYRIGHT 2008 ACS on STN  
TI Drug delivery systems containing drugs in a water soluble composition immersed in a hydrophobic medium for improved penetration through biological barriers
- L7 ANSWER 13 OF 18 CAPLUS COPYRIGHT 2008 ACS on STN  
TI Combined nanotechnology and sensor technologies for simultaneous diagnosis and treatment
- L7 ANSWER 14 OF 18 CAPLUS COPYRIGHT 2008 ACS on STN  
TI Nonaqueous single phase vehicles and formulations utilizing such vehicles
- L7 ANSWER 15 OF 18 CAPLUS COPYRIGHT 2008 ACS on STN  
TI High viscosity liquid controlled drug delivery system and medical or surgical device
- L7 ANSWER 16 OF 18 CAPLUS COPYRIGHT 2008 ACS on STN  
TI Catheter injectable depot compositions containing polymers
- L7 ANSWER 17 OF 18 CAPLUS COPYRIGHT 2008 ACS on STN  
TI Polymer-based sustained release particle dispersions
- L7 ANSWER 18 OF 18 CAPLUS COPYRIGHT 2008 ACS on STN  
TI Protected one-vial formulation for nucleic acid molecules, methods of making the same by in-line mixing, and related products and methods

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L7 ANSWER 5 OF 18 CAPLUS COPYRIGHT 2008 ACS on STN  
ACCESSION NUMBER: 2007:671763 CAPLUS <<LOGINID::20080117>>  
DOCUMENT NUMBER: 147:102138  
TITLE: Spray-on formulations and methods for dermal delivery of drugs  
INVENTOR(S): Zhang, Jie; Warner, Kevin S.; Sharma, Sanjay  
PATENT ASSIGNEE(S): Zars, Inc., USA  
SOURCE: PCT Int. Appl., 52pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 17  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2007070694	A2	20070621	WO 2006-US48060	20061214
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				

US 2007280972	A1	20071206	US 2007-796145	20070425
PRIORITY APPLN. INFO.:			US 2005-750637P	P 20051214
			US 2006-795091P	P 20060425

AB The present invention is drawn to sprayable formulations, methods of drug delivery, and resultant solidified layers for dermal delivery of a drug. The formulation can include a drug, a non-volatile solvent system, a solidifying agent, and a propellant. The formulation can have an initial viscosity suitable to be expelled out of a pressurized or manual pump container and applied onto a skin surface as a layer. When applied to the skin, the formulation can form a solidified layer after at least a portion of the propellant is evaporated. Thus, a pressurized container filled with a sprayable solidifying formulation for delivering a drug was prepared containing ketoprofen, a solidifying agents of polyvinyl alc. (31,000-50,000 Mw) and esters of polyvinyl Me ether/maleic anhydride copolymer (80,000-160,000 Mw) (Gantrez ES-425), a nonvolatile solvent system of propylene glycol and glycerol, and a volatile solvent system of water and ethanol. By adding a sufficient concentration of the propellant, the container becomes inherently pressurized. The spray was used by a subject on an ankle suffering from pain or inflammation caused by an injury or arthritis. The solidifying formulation quickly solidified into a soft, coherent, and elastic solid layer after the evaporation of the propellant and the volatile solvent(s), and remained in intimate contact with the skin site until removal by the subject. The solidified layer delivered a therapeutically effective amount of ketoprofen across the skin and into the ankle tissues over at least 2 h, and preferably at least 8 h, to control pain and inflammation. The nonvolatile solvent(s) kept the solidified layer soft, coherent, and elastic, as well as provided a flux-enabling solvent in the solidified layer to continuously deliver the ketoprofen through the skin in the absence of water or more volatile solvents and propellants. At the end of the intended application period, the solidified layer was lifted from the skin due to its good cohesion.

IT Acrylic polymers, biological studies  
 Amides, biological studies  
 Candelilla wax  
 Carnauba wax  
 Caseins, biological studies  
 Castor oil  
 Cocoa butter  
 Coconut oil  
 Corn oil  
 Corticosteroids, biological studies  
 Cottonseed oil  
 Diglycerides  
 Fats and Glyceridic oils, biological studies  
 Fatty acids, biological studies  
 Gelatins, biological studies  
 Glutens  
 Glycerides, biological studies  
 Hydrocarbon oils  
 Interferons  
 Isobutylene rubber  
 Lanolin  
 Monoglycerides  
 Palm oil  
 Peanut oil  
 Petrolatum  
 Polyoxyalkylenes, biological studies  
 Polysiloxanes, biological studies  
 Polyurethanes, biological studies

Prolamins  
 Shellac  
 Soybean oil  
 Tocopherols  
 Waxes  
 Zeins

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(spray-on adhesive, solidifying formulations for dermal drug delivery)

IT 50-03-3, Hydrocortisone acetate 50-21-5, Lactic acid, biological studies  
 50-23-7, Hydrocortisone 50-28-2, Estradiol, biological studies  
 50-48-6, Amitriptyline 50-70-4, Sorbitol, biological studies 51-98-9,  
 Norethindroneacetate 52-76-6, Lynestrenol 53-16-7, biological studies  
 53-39-4, Oxandrolone 53-86-1, Indomethacin 54-42-2, Idoxuridine  
 56-81-5, Glycerol, biological studies 57-13-6, Urea, biological studies  
 57-55-6, Propylene glycol, biological studies 57-55-6D, Propylene  
 glycol, fatty acid esters 57-55-6D, Propylene glycol, mixed C8-10-alkyl  
 esters 57-63-6, Ethinyl estradiol 57-83-0, Progesterone, biological  
 studies 58-18-4, Methyl testosterone 58-22-0, Testosterone 60-54-8,  
 Tetracycline 63-05-8, Androstenedione 64-17-5, Ethanol, biological  
 studies 65-85-0, Benzoic acid, biological studies 67-63-0, Isopropyl  
 alcohol, biological studies 67-68-5, Dimethyl sulfoxide, biological  
 studies 67-73-2, Fluocinolone acetonide 67-97-0, Cholecalciferol  
 68-12-2, Dimethylformamide, biological studies 68-22-4, Norethindrone  
 69-72-7, Salicylic acid, biological studies 70-00-8, Trifluridine  
 71-36-3, Butanol, biological studies 71-58-9, Medroxyprogesterone  
 acetate 74-98-6, Propane, biological studies 75-01-4, Vinyl chloride,  
 biological studies 75-28-5, Isobutane 75-37-6, 1,1-Difluoroethane  
 76-03-9, Trichloroacetic acid, biological studies 76-25-5, Triamcinolone  
 acetonide 77-86-1, Tromethamine 77-93-0, Triethyl citrate 78-78-4,  
 Isopentane 79-10-7D, Acrylic acid, derivs. 79-41-4, Methacrylic acid,  
 biological studies 84-66-2, Diethyl phthalate 94-24-6, Tetracaine  
 94-36-0, Benzoyl peroxide, biological studies 96-33-3, Methyl acrylate  
 97-53-0, Eugenol 97-59-6, Allantoin 100-51-6, Benzyl alcohol,  
 biological studies 102-71-6, Trolamine, biological studies 102-76-1,  
 Triacetin 104-46-1, p-Propenylanisole 104-55-2, Cinnamaldehyde  
 106-69-4, 1,2,6-Hexanetriol 106-97-8, Butane, biological studies  
 107-21-1, Ethylene glycol, biological studies 108-05-4, Vinyl acetate,  
 biological studies 108-46-3, Resorcinol, biological studies 108-95-2,  
 Phenol, biological studies 109-43-3, Dibutyl sebacate 109-66-0,  
 Pentane, biological studies 110-16-7D, Maleic acid, copolymers  
 110-27-0, Isopropyl myristate 110-40-7, Diethyl sebacate 111-02-4,  
 Squalene 111-42-2, Diethanolamine, biological studies 111-62-6, Ethyl  
 oleate 111-90-0, Diethylene glycol monoethyl ether 112-38-9,  
 Undecylenic acid 112-72-1, Myristyl alcohol 112-80-1, Oleic acid,  
 biological studies 114-07-8, Erythromycin 115-10-6, Dimethyl ether  
 120-40-1, Lauric diethanolamide 120-51-4, Benzyl benzoate 123-39-7,  
 N-Methyl formamide 124-38-9, Carbon dioxide, biological studies  
 126-07-8, Griseofulvin 131-11-3, Dimethyl phthalate 137-58-6,  
 Lidocaine 138-86-3, Limonene 142-91-6, Isopropyl palmitate 143-28-2,  
 Oleyl alcohol 151-41-7, Lauryl sulfate 152-62-5, Dydrogesterone  
 297-76-7, Ethynodiol diacetate 298-46-4, Carbamazepine 302-22-7,  
 Chlormadinone acetate 302-79-4, Tretinoin 356-12-7, Fluocinonide  
 382-67-2, Desoximethasone 427-51-0, Cyproterone acetate 431-89-0,  
 1,1,1,2,3,3-Heptafluoropropane 518-28-5, Podofilox 521-18-6,  
 Dihydrotestosterone 638-94-8, Desonide 646-06-0D, Dioxolane, alkyl  
 derivs. 661-19-8, Behenyl alcohol 690-39-1, 1,1,1,3,3,3-  
 Hexafluoropropane 768-94-5, Amantadine 777-11-7, Haloprogin  
 797-63-7, Levonorgestrel 811-97-2, 1,1,1,2-Tetrafluoroethane 872-50-4,  
 N-Methylpyrrolidone, biological studies 1143-38-0, Anthralin

1319-77-3, Cresol 1338-39-2, Sorbitan monolaurate 1338-43-8, Sorbitan monooleate 1397-89-3, Amphotericin B 1400-61-9, Nystatin 1404-04-2, Neomycin 1404-26-8, Polymyxin B 1405-87-4, Bacitracin 1406-18-4, Vitamin E 1524-88-5, Flurandrenolide 1984-15-2, Medronic acid 2002-29-1, Flumethasone pivalate 2152-44-5, Betamethasone valerate 2398-96-1, Tolnaftate 3056-17-5, Stavudine 3093-35-4, Halcinonide 3562-63-8, Megestrol 4070-80-8 4205-90-7, Clonidine 4759-48-2, Isotretinoin 5261-23-4, Tetrahydroxypropylethylenediamine 5306-85-4, Dimethyl isosorbide 5593-20-4, Betamethasone dipropionate 5630-53-5, Tibolone 6283-92-7, Lauryl lactate 6533-00-2, dl-Norgestrel 6740-88-1, Ketamine 7280-37-7, Estropipate 7481-89-2, Zalcitabine 7681-93-8, Pimaricin 7704-34-9, Sulfur, biological studies 7727-37-9, Nitrogen, biological studies 9000-07-1, Carrageenan 9000-30-0, Guar gum 9000-40-2, Locust bean gum 9002-89-5, Polyvinyl alcohol 9003-01-4, Carboxypolyethylene 9003-20-7, Polyvinyl acetate 9003-39-8, Polyvinylpyrrolidone 9003-70-7, Divinylbenzene-styrene copolymer 9004-32-4, Carboxymethyl cellulose sodium 9004-34-6, Cellulose, biological studies 9004-35-7 9004-38-0, Cellulose acetate phthalate 9004-53-9, Dextrin 9004-57-3, Ethyl cellulose 9004-62-0, Hydroxy ethyl cellulose 9004-64-2, Hydroxypropyl cellulose 9004-65-3, Hydroxypropyl methyl cellulose 9004-67-5, Methyl cellulose 9004-81-3, Polyethylene glycol laurate 9004-95-9, Polyethylene glycol cetyl ether 9004-96-0, Polyethylene glycol oleate 9004-99-3, PEG stearate 9005-00-9, Polyethylene glycol stearyl ether 9005-07-6, Polyethylene glycol dioleate 9005-08-7, Polyethylene glycol distearate 9005-25-8, Starch, biological studies 9005-63-4, Polyethylene glycol sorbitan 9005-63-4D, Polyethylene glycol sorbitan, fatty acid esters 9005-67-8, Polyethylene glycol sorbitan monostearate 9006-65-9, Dimethicone 9011-16-9D, Maleic anhydride-vinyl methyl ether copolymer, esters 9011-21-6, PEG glyceryl stearate 9063-89-2, PEG-octyl phenyl ether 10124-68-2D, N-Octylacrylamide, acrylic polymer derivs. 11138-66-2, Xanthan gum 12426-97-0, Picrolite 12441-09-7D, Sorbitan, fatty acid esters 12650-69-0, Mupirocin 13392-28-4, Rimantadine 13609-67-1, Hydrocortisone butyrate 15307-86-5, Diclofenac 16057-43-5, 2-[2-(Octadecyloxy)ethoxy]ethanol 16325-47-6 18323-44-9, Clindamycin 18641-57-1, Glyceryl behenate 22071-15-4, Ketoprofen 22916-47-8, Miconazole 23593-75-1, Clotrimazole 24937-78-8, Ethylene-vinyl acetate copolymer 24938-16-7, Dimethylaminoethyl methacrylate-butyl methacrylate-methyl methacrylate copolymer 25013-16-5, Butylated hydroxyanisole 25087-26-7, Poly(methacrylic acid) 25122-41-2, Clobetasol 25122-46-7, Clobetasol propionate 25212-88-8, Ethyl acrylate-methacrylic acid copolymer 25265-71-8, Dipropylene glycol 25265-75-2, Butylene glycol 25322-68-3, Polyethylene oxide 25322-68-3D, PEG, alkyl ethers 25322-69-4, Polypropylene glycol 25395-31-7, Diacetin 25496-72-4, Glycerol monooleate 25608-33-7, Butyl methacrylate-methyl methacrylate copolymer 25618-55-7, Polyglycerol 26266-57-9, Sorbitan monopalmitate 26446-35-5, Monoacetin 27214-38-6, Glyceryl monomyristate 27220-47-9, Econazole 28874-51-3 28981-97-7, Alprazolam 30399-84-9, Isostearic acid 30516-87-1, Zidovudine 31694-55-0D, Polyethylene glycol glycerin ether, triesters with fatty acids 32222-06-3, Calcitriol 33434-24-1, Ethyl acrylate-methyl methacrylate-trimethylammonioethyl methacrylate chloride copolymer 33564-31-7, Diflorasone diacetate 34184-77-5, Promegestone 34513-50-3, Octyldodecanol 35189-28-7, Norgestimate 36322-90-4, Piroxicam 36653-82-4, Cetyl alcohol 36791-04-5, Ribavirin 37321-65-6, Propylene glycol stearate 37353-59-6, Hydroxymethyl cellulose 38396-39-3, Bupivacaine 39809-25-1, Penciclovir 41621-49-2, Ciclopirox olamine 53016-31-2, Norelgestromin 53237-50-6 54024-22-5, Desogestrel 54182-62-6, Polacriletin 54578-91-5, Gantrez ES-425 56275-01-5

57107-95-6 57333-96-7, Tacalcitol 57524-89-7, Hydrocortisone valerate  
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (spray-on adhesive, solidifying formulations for dermal drug delivery)

L7 ANSWER 9 OF 18 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 2006:796031 CAPLUS <>LOGINID::20080117>>  
 DOCUMENT NUMBER: 145:217974  
 TITLE: Solvent/polymer solutions as suspension vehicles  
 INVENTOR(S): Rohloff, Catherine M.; Chen, Guohua; Luk, Andrew S.;  
 Ayer, Rupal A.; Houston, Paul R.; Desjardin, Michael  
 A.; Zamora, Pauline; Lam, Stan  
 PATENT ASSIGNEE(S): Alza Corporation, USA  
 SOURCE: PCT Int. Appl., 49 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2006083761	A2	20060810	WO 2006-US3192	20060127
WO 2006083761	A3	20060928		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
US 2006193918	A1	20060831	US 2006-347562	20060203

PRIORITY APPLN. INFO.: US 2005-650225P P 20050203

AB A nonaq., single-phase vehicle that is capable of suspending an active agent includes at least one solvent and at least one polymer and is formulated to exhibit phase separation upon contact with an aqueous environment.

The at least one solvent may be selected from the group consisting of benzyl benzoate, decanol, ethylhexyl lactate, and mixts. thereof and the at least one polymer may be selected from the group consisting of a polyester, pyrrolidone, ester of an unsatd. alc., ether of an unsatd. alc., polyoxyethylene-polyoxypropylene block copolymer, and mixts. thereof. In one embodiment, the at least one solvent is benzyl benzoate and the at least one polymer is polyvinylpyrrolidone. A stable, nonaq. suspension formulation that includes the nonaq., single-phase vehicle and an active agent, and a method of forming the same, are also disclosed. The stability and in vitro release of  $\alpha$ - interferon in a benzyl benzoate and a benzyl benzoate/benzyl alc. suspension vehicle were determined

AB A nonaq., single-phase vehicle that is capable of suspending an active agent includes at least one solvent and at least one polymer and is formulated to exhibit phase separation upon contact with an aqueous environment.

The at least one solvent may be selected from the group consisting of benzyl benzoate, decanol, ethylhexyl lactate, and mixts. thereof and the

at least one polymer may be selected from the group consisting of a polyester, pyrrolidone, ester of an unsatd. alc., ether of an unsatd. alc., polyoxyethylene-polyoxypropylene block copolymer, and mixts. thereof. In one embodiment, the at least one solvent is benzyl benzoate and the at least one polymer is polyvinylpyrrolidone. A stable, nonaq. suspension formulation that includes the nonaq., single-phase vehicle and an active agent, and a method of forming the same, are also disclosed. The stability and in vitro release of  $\omega$ - interferon in a benzyl benzoate and a benzyl benzoate/benzyl alc. suspension vehicle were determined

## IT Interferons

RL: PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (m; solvent/polymer solns. as suspension vehicles)

IT 100-51-6, Benzyl alcohol, biological studies 112-53-8, Lauryl alcohol 120-51-4, Benzyl benzoate 616-45-5, Pyrrolidone 6283-86-9, 2-Ethylhexyl lactate 6283-92-7, Lauryl lactate 9003-39-8, Pvp  
 RL: MOA (Modifier or additive use); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (solvent/polymer solns. as suspension vehicles)

L7 ANSWER 11 OF 18 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2005:1310054 CAPLUS &lt;&lt;LOGINID::20080117&gt;&gt;

DOCUMENT NUMBER: 144:57512

TITLE: Non-aqueous formulations containing biodegradable polymers and methionine and solvents for removing peroxides and reducing the oxidative degradation of drugs

INVENTOR(S): Fereira, Pamela J.; Desjardin, Michael A.; Rohloff, Catherine M.; Berry, Stephen A.; Zlatkova-Karaslavova, Ekaterina S.

PATENT ASSIGNEE(S): USA

SOURCE: U.S. Pat. Appl. Publ., 36 pp., Cont.-in-part of U.S. Ser. No. 814,826.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 3

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2005276856	A1	20051215	US 2005-183477	20050718
US 2005008661	A1	20050113	US 2004-814826	20040331
WO 2006083950	A2	20060810	WO 2006-US3524	20060201
WO 2006083950	A3	20061123		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
AU 2006210560	A1	20060810	AU 2006-210560	20060203

CA 2596860	A1	20060810	CA 2006-2596860	20060203
WO 2006084140	A2	20060810	WO 2006-US3858	20060203
WO 2006084140	A3	20070111		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,  
 CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,  
 GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR,  
 KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX,  
 MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE,  
 SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC,  
 VN, YU, ZA, ZM, ZW  
 RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,  
 IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ,  
 CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH,  
 GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,  
 KG, KZ, MD, RU, TJ, TM

EP 1843747 A2 20071017 EP 2006-720234 20060203

R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,  
 IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, AL,  
 BA, HR, MK, YU

PRIORITY APPLN. INFO.: US 2003-459300P P 20030331  
 US 2004-814826 A2 20040331  
 US 2005-650252P P 20050203  
 US 2005-183477 A 20050718  
 WO 2006-US3858 W 20060203

AB The present invention is related to materials and methods for forming polymeric delivery vehicles that reduces risk of oxidative degradation of a carried drug and the resulting compns. For example, stability of  $\omega$ -IFN was improved by adding L-methionine into PVP to remove peroxides.

IT Interferons

RL: FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (non-aqueous formulations containing biodegradable polymers and methionine

and solvents for removing peroxides and reducing oxidative degradation of drugs)

IT Interferons

RL: FFD (Food or feed use); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (o; non-aqueous formulations containing biodegradable polymers and methionine and solvents for removing peroxides and reducing oxidative degradation of drugs)

IT 50-56-6, Oxytocin, biological studies 58-82-2, Bradykinin 9002-60-2, Adrenocorticotropic hormone, biological studies 9002-69-1, Relaxin 9002-72-6, Somatotropin 9003-39-8, PVP 9004-10-8, Insulin, biological studies 9004-67-5, Methyl cellulose 9007-12-9, Calcitonin 9007-92-5, Glucagon, biological studies 9034-40-6, LHRH 9041-90-1, Angiotensin I 9061-61-4, Nerve growth factor 11000-17-2, Vasopressin 11128-99-7, Angiotensin II 25322-68-3, PEG 31362-50-2, Bombesin 33507-63-0, Substance P 33515-09-2, Gonadorelin 38234-21-8, Fertirelin 39379-15-2, Neurotensin 51110-01-1, Somatostatin 52906-92-0, Motilin 53714-56-0, Leuprolide 57773-63-4, Triptorelin 60617-12-1,  $\beta$ -Endorphin 61512-76-3,  $\alpha$ -Endorphin 62229-50-9, Epidermal growth factor 65807-02-5, Goserelin 76712-82-8, Histrelin 76932-56-4, Nafarelin 85637-73-6, Atrial natriuretic peptide 89750-14-1, GLP-1 106392-12-5, Ethylene glycol-propylene glycol block copolymer 107873-08-5, Gonadotropin-releasing factor (human ovary follicle) 116243-73-3, Endothelin 119418-04-1, Galanin 123423-09-6, Cerebellin

10/814,826 01/17/2008

RL: FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

and  
(non-aqueous formulations containing biodegradable polymers and methionine

solvents for removing peroxides and reducing oxidative degradation of drugs)

IT 56-81-5, Glycerine, uses 57-55-6, Propylene glycol, uses 100-51-6, Benzyl alcohol, uses 872-50-4, n-Methylpyrrolidone, uses 4740-78-7, 1,3-Dioxan-5-ol 5464-28-8, 1,3-Dioxolane-4-methanol 31692-85-0, Glycofurool 52814-38-7, Tetraglycol

RL: NUU (Other use, unclassified); USES (Uses)

and  
(non-aqueous formulations containing biodegradable polymers and methionine

solvents for removing peroxides and reducing oxidative degradation of drugs)

L7 ANSWER 12 OF 18 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2005:1132649 CAPLUS <>LOGINID::20080117>>

DOCUMENT NUMBER: 143:411065

TITLE: Drug delivery systems containing drugs in a water soluble composition immersed in a hydrophobic medium for improved penetration through biological barriers

INVENTOR(S): Ben-Sasson, Shmuel A.

PATENT ASSIGNEE(S): Israel

SOURCE: U.S. Pat. Appl. Publ., 25 pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2005232981	A1	20051020	US 2005-105763	20050414
AU 2005329255	A1	20060921	AU 2005-329255	20050414
CA 2563533	A1	20060921	CA 2005-2563533	20050414
WO 2006097793	A2	20060921	WO 2005-IB4183	20050414
WO 2006097793	A3	20061221		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
EP 1742663	A2	20070117	EP 2005-857653	20050414
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, AL, BA, HR, LV, MK, YU				
JP 2007532629	T	20071115	JP 2007-507872	20050414
CN 101084016	A	20071205	CN 2005-80014711	20050414
IN 2006KN02912	A	20070608	IN 2006-KN2912	20061010
US 2007219131	A1	20070920	US 2006-551543	20061020
KR 2007044805	A	20070430	KR 2006-723930	20061115

PRIORITY APPLN. INFO.: US 2004-562345P P 20040415  
US 2005-105763 A2 20050414  
WO 2005-IB4183 W 20050414

OTHER SOURCE(S): MARPAT 143:411065

AB This invention relates to novel penetrating compns. including one or more effectors included within a water soluble composition, immersed in a hydrophobic medium. The invention also relates to methods of treating or preventing diseases by administering such penetrating compns. to affected subjects. For example, a composition with improved insulin across epithelial barrier contained insulin, spermine, phytic acid, sodium dodecanoate, octanol/geraniol, mineral oil/medium chain triglycerides/castor oils.

IT Alcohols, biological studies  
Antibodies and Immunoglobulins  
Antigens  
Aromatic compounds  
Bile salts  
Castor oil  
Cyclic compounds  
Cycloalkanols  
DNA  
Diglycerides  
Dipeptides  
Enkephalins  
Enzymes, biological studies  
Esters, biological studies  
Ethers, biological studies  
Fatty acids, biological studies  
Glycerides, biological studies  
Glycols, biological studies  
Glycosaminoglycans, biological studies  
Growth factors, animal  
Hormones, animal, biological studies  
Interferons  
Interleukin 2  
Lecithins  
Monoglycerides  
Neurotrophic factors  
Nucleic acids  
Paraffin oils  
Peptides, biological studies  
Phosphonates  
Polyoxyalkylenes, biological studies  
Polysaccharides, biological studies  
Proteins  
Quaternary ammonium compounds, biological studies  
RNA  
Terpenes, biological studies  
Toxins  
Tripeptides  
Vitamins  
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(drug delivery systems with improved penetration through biol. barriers containing drugs in water soluble composition immersed in hydrophobic media)

IT Interferons  
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(a; drug delivery systems with improved penetration through biol.

barriers containing drugs in water soluble composition immersed in hydrophobic media)

IT 53-79-2, Puromycin 55-91-4, DFP 56-45-1D, L-Serine, borate complexes 56-81-5, Glycerol, biological studies 57-55-6, Propylene glycol., biological studies 57-88-5, Cholesterol, biological studies 57-88-5D, Cholesterol, derivs. 60-00-4, EDTA, biological studies 60-00-4D, EDTA, conjugates with chitosan 60-01-5, Glyceryl tributyrate 64-17-5, Ethanol, biological studies 66-71-7, 1,10-Phenanthroline 67-63-0, Isopropanol, biological studies 68-19-9, Vitamin B12 71-23-8, Propanol, biological studies 71-36-3, Butanol, biological studies 71-41-0, Pentanol, biological studies 71-44-3, Spermine 89-78-1, Menthol 100-51-6, Benzyl alcohol, biological studies 106-24-1, Geraniol 108-39-4, m-Cresol., biological studies 108-95-2, Phenol, biological studies 111-27-3, Hexanol, biological studies 111-70-6, 1-Heptanol 111-87-5, Octanol, biological studies 112-30-1, Decanol 112-42-5, Undecanol 112-53-8, Dodecanol 120-51-4, Benzyl benzoate 143-08-8, Nonanol 151-21-3, Sodium dodecyl sulfate, biological studies 329-98-6, PMSF 501-52-0, Benzenepropanoic acid 616-91-1 629-25-4, Sodium dodecanoate 863-57-0, Sodium glycocholate 1002-62-6, Sodium decanoate 1256-86-6, Cholesterol sulfate 1338-39-2, Sorbitan monolaurate 1338-43-8, Sorbitan monooleate 1405-87-4, Bacitracin 1984-06-1, Sodium octanoate 2364-87-6, TLCK 2373-23-1, Dioctyl sulfosuccinate 3858-83-1, p-Aminobenzamidine 4602-84-0, Farnesol. 7400-08-0, 4-Hydroxycinnamic acid 8001-27-2, Hirudin 9002-64-6, Parathyroid hormone 9002-67-9, Luteinizing hormone 9002-68-0, Follicle-stimulating hormone 9002-72-6, Growth hormone 9002-79-3, Melanocyte stimulating hormone 9002-89-5, Polyvinyl alcohol 9003-01-4D, Poly(acrylic acid), derivs. 9003-39-8, Polyvinylpyrrolidone 9004-10-8, Insulin, biological studies 9004-57-3, Ethylcellulose 9004-61-9, Hyaluronic acid 9004-65-3, Hydroxypropylmethylcellulose 9004-67-5, Methylcellulose 9005-49-6, Heparin, biological studies 9007-12-9, Calcitonin 9007-28-7, Chondroitin sulfate 9012-76-4D, Chitosan, conjugates with EDTA 9034-40-6D, Luteinizing hormone releasing hormone, analogs 9041-92-3,  $\alpha$ 1-Antitrypsin 9050-30-0 9076-44-2, Chymostatin 9078-38-0, Soybean trypsin inhibitor 9088-07-7, Natriuretic peptide 10041-19-7, Dioctyl sulfosuccinate 10465-78-8, Diamide 11096-26-7, Erythropoietin 13780-71-7D, Boronic acid, amino derivs. 13780-71-7D, Boronic acid, biphenyl, complexes with sugar 16749-13-6D, Phosphonium, derivs. 16969-45-2D, Pyridinium, derivs. 17009-90-4D, Imidazolium, derivs. 24967-94-0, Dermatan sulfate 25322-68-3D, PEG, fatty alc. ethers 25496-72-4, Glyceryl monooleate 26266-57-9, Sorbitan monopalmitate 26402-22-2, Glyceryl monodecanoate 26402-26-6 26657-96-5, Glyceryl monopalmitate 27214-38-6, Glyceryl monomyristate 27215-38-9, Glyceryl monolaurate 30827-99-7, AEBSF 31566-31-1, Glyceryl monostearate 33069-62-4, Taxol 36357-77-4, Phosphoramidon 37330-34-0, Bowman-birk inhibitor 37691-11-5, Antipain 42228-92-2, Acivicin 45470-32-4, 1,3-Dimethylimidazolium 51798-45-9, Elastatinal 54241-84-8, Incretin 54548-50-4, m-Chlorocresol. 55123-66-5, Leupeptin 57680-56-5, Sucrose octasulfate 58970-76-6, Bestatin 59721-29-8 61909-81-7, sol. utol HS15 64111-53-1 65039-03-4, 1-Ethyl-3-methylimidazolium 65144-34-5 67655-94-1, Amastatin 70904-56-2, Kyotorphin 71933-13-6, APMSF 76721-89-6, Thiorphan 80432-08-2, 1-Butyl-3-methylimidazolium 81627-83-0, Monocyte colony stimulating factor 81733-79-1, Dalargin 85100-82-9, 1-Hexyl-3-methylimidazolium 88105-67-3 89703-10-6, FK 448 89750-14-1, Glucagon-like peptide 1 104993-28-4, Fondaparinux 106096-93-9, Basic fibroblast growth factor 106392-12-5, Poloxamer 125867-77-8 128270-60-0, Hirulog 143011-72-7, Granulocyte colony

stimulating factor 147245-92-9, Glatiramer acetate 157310-70-8,  
 1,2-Dimethyl-3-propylimidazolium 162808-62-0, Caspofungin 178631-03-3  
 313475-49-9 343952-32-9 679809-58-6, Enoxaparin sodium  
 RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL  
 (Biological study); USES (Uses)

(drug delivery systems with improved penetration through biol. barriers  
 containing drugs in water soluble composition immersed in hydrophobic media)

L7 ANSWER 14 OF 18 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 2004:878282 CAPLUS <>LOGINID::20080117>>  
 DOCUMENT NUMBER: 141:370544  
 TITLE: Nonaqueous single phase vehicles and formulations  
 utilizing such vehicles  
 INVENTOR(S): Fereira, Pamela; Desjardin, Michael; Rohloff,  
 Catherine; Berry, Stephen  
 PATENT ASSIGNEE(S): Alza Corporation, USA  
 SOURCE: PCT Int. Appl., 32 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 3  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004089335	A2	20041021	WO 2004-US9755	20040331
WO 2004089335	A3	20050210		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2004227837	A1	20041021	AU 2004-227837	20040331
CA 2520775	A1	20041021	CA 2004-2520775	20040331
EP 1610765	A2	20060104	EP 2004-749544	20040331
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK				
BR 2004008925	A	20060404	BR 2004-8925	20040331
CN 1767815	A	20060503	CN 2004-80008854	20040331
JP 2006522133	T	20060928	JP 2006-509491	20040331
IN 2005KN01960	A	20070209	IN 2005-KN1960	20051004
NO 2005004904	A	20051215	NO 2005-4904	20051024
PRIORITY APPLN. INFO.:			US 2003-459300P	P 20030331
			WO 2004-US9755	W 20040331

AB The present invention includes materials and methods for providing vehicles useful for providing drug formulations that address the potential drawbacks of known nonaq. formulations. In particular, the present invention includes nonaq. vehicles that are formed using a combination of polymer and solvent that results in a vehicle that is miscible in water. The nonaq. vehicles facilitate the formulation of drug formulations that are stable over time, even when stored at, or exposed to, elevated temps. Moreover, the miscible vehicles of the present invention allow the preparation of drug formulations that work to reduce the occurrence of partial or

complete occlusions of the delivery conduits included in delivery devices used to administer the drug formulations. A vehicle formulation contained benzyl alc. and PVP and showed good miscibility characteristics.

IT Antisense oligonucleotides  
 Blood-coagulation factors  
 Enkephalins  
 Gonadotropins  
 Interferons  
 Peptides, biological studies  
 Polyesters, biological studies  
 Polymers, biological studies  
 Proteins  
 Ribozymes  
 Tumor necrosis factors  
 Vitamins  
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (nonaq. single phase vehicles and formulations utilizing such vehicles)

IT 50-56-6, Oxytocin, biological studies 56-81-5, Glycerin, biological studies 57-55-6, Propylene glycol, biological studies 58-82-2, Bradykinin 100-51-6, Benzyl alcohol, biological studies 872-50-4, N-Methylpyrrolidone, biological studies 4740-78-7, Glycerol formal 5464-28-8, Glycerol formal 9001-63-2, Lysozyme 9002-60-2, ACTH, biological studies 9002-69-1, Relaxin 9003-39-8, Polyvinylpyrrolidone 9004-10-8, Insulin, biological studies 9007-12-9, Calcitonin 9007-92-5, Glucagon, biological studies 9034-40-6, LHRH 9041-90-1, Angiotensin I 9061-61-4, Nerve growth factor 11000-17-2, Vasopressin 11128-99-7, Angiotensin II 12629-01-5, Human growth hormone 31362-50-2, Bombesin 31692-85-0, Glycofurool 33507-63-0, Substance P 33515-09-2, Gonadorelin 38234-21-8, Fertirelin 39379-15-2, Neurotensin 51110-01-1, Somatostatin 52814-38-7, Tetraglycol 52906-92-0, Motilin 53714-56-0, Leuprolide 57773-63-4, Triptorelin 60617-12-1,  $\beta$ -Endorphin 61512-76-3,  $\alpha$ -Endorphin 62229-50-9, EGF 65807-02-5, Goserelin 76712-82-8, Histrelin 76932-56-4, Nafarelin 85637-73-6, Atrial natriuretic peptide 89750-14-1, GLP-1 116243-73-3, Endothelin 119418-04-1, Galanin 123423-09-6, Cerebellin 304853-26-7, Ghrelin 691397-13-4, Pluronic RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (nonaq. single phase vehicles and formulations utilizing such vehicles)

L7 ANSWER 15 OF 18 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 2004:433684 CAPLUS <<LOGINID::20080117>>  
 DOCUMENT NUMBER: 140:429037  
 TITLE: High viscosity liquid controlled drug delivery system and medical or surgical device  
 INVENTOR(S): Gibson, John W.; Miller, Stacey S.; Middleton, John C.; Tipton, Arthur J.  
 PATENT ASSIGNEE(S): USA  
 SOURCE: U.S. Pat. Appl. Publ., 27 pp., Cont.-in-part of U.S. Ser. No. 699,002.  
 CODEN: USXXCO  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 5  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004101557	A1	20040527	US 2002-316441	20021210
US 5747058	A	19980505	US 1995-474337	19950607

EP 1525858	A1	20050427	EP 2005-75143	19960607
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
CN 1781555	A	20060607	CN 2005-10104020	19960607
US 6413536	B1	20020702	US 1999-385107	19990827
US 7053209	B1	20060530	US 2000-699002	20001026
AU 2003200423	A1	20030410	AU 2003-200423	20030207
WO 2004052336	A2	20040624	WO 2003-US39311	20031210
WO 2004052336	A3	20060615		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2003297848	A1	20040630	AU 2003-297848	20031210
AU 2006203112	A1	20060810	AU 2006-203112	20060720
JP 2007126459	A	20070524	JP 2006-304264	20061109
PRIORITY APPLN. INFO.:				
			US 1995-474337	A2 19950607
			US 1995-478450	B2 19950607
			US 1997-944022	A2 19970915
			US 1999-385107	A3 19990827
			US 2000-699002	A2 20001026
			CN 1996-195895	A3 19960607
			EP 1996-921521	A3 19960607
			JP 1997-502181	A3 19960607
			AU 1998-94750	A3 19980908
			US 2002-316441	A 20021210
			AU 2003-200423	A3 20030207
			WO 2003-US39311	W 20031210

AB The present invention relates to novel nonpolymeric compds. and compns. that form liquid, high viscosity materials suitable for the delivery of biol. active substances in a controlled fashion, and for use as medical or surgical devices. The materials can optionally be diluted with a solvent to form a material of lower viscosity, rendering the material easy to administer. This solvent may be water insol. or water soluble, where the water soluble solvent rapidly diffuses or migrates away from the material in vivo, leaving a higher viscosity liquid material. 1,6-Hexanediol lactate  $\epsilon$ -hydroxycaproic acid produced in was dissolved in N-methylpyrrolidone at a weight ratio of 70:30. Bupivacaine base (10%) was then added to this mixture. Drops weighing approx. 100 mg were precipitated into 40 mL buffer. At 4 h, around 4.1 weight% of the bupivacaine contained in the precipitated drop had been released. At 24 h, around 8.6 weight% of the bupivacaine had been released.

## IT Interferons

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (α; high viscosity liquid controlled drug delivery system and medical or surgical device)

## IT Interferons

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (β; high viscosity liquid controlled drug delivery system and medical or surgical device)

IT 57-50-1, Sucrose, biological studies 9003-39-8,

Polyvinylpyrrolidone 9004-34-6D, Cellulose, esters or ethers  
 9004-36-8, Cellulose acetate butyrate 9004-39-1, Cellulose acetate  
 propionate 24980-41-4, Polycaprolactone 25248-42-4, Polycaprolactone  
 25322-68-3, Polyethylene glycol 26009-03-0, Polyglycolide 26023-30-3,  
 Poly[oxy(1-methyl-2-oxo-1,2-ethanediyl)] 26100-51-6, Poly(DL-lactic  
 acid) 26202-08-4, Polyglycolide 26680-10-4, Polylactide 26780-50-7,  
 Glycolide-lactide copolymer  
 RL: MOA (Modifier or additive use); THU (Therapeutic use); BIOL  
 (Biological study); USES (Uses)  
 (high viscosity liquid controlled drug delivery system and medical or  
 surgical device)

IT 50-02-2, Dexamethasone 50-28-2, 17 $\beta$ -Estradiol, biological studies  
 51-43-4, Epinephrine 55-56-1, Chlorhexidine 56-81-5, Glycerol,  
 biological studies 57-83-0, Progesterone, biological studies 58-55-9,  
 Theophylline, biological studies 59-46-1, Procaine 60-54-8,  
 Tetracycline 64-17-5, Ethanol, biological studies 67-68-5, DMSO,  
 biological studies 77-93-0, Triethyl citrate 94-09-7, Benzocaine  
 94-24-6, Tetracaine 96-88-8, Mepivacaine 97-64-3, Ethyl lactate  
 100-51-6, Benzyl alcohol, biological studies 102-76-1, Triacetin  
 108-32-7, Propylene carbonate 120-51-4, Benzyl benzoate 126-13-6,  
 Sucrose acetate isobutyrate 133-16-4, Chloroprocaine 137-58-6,  
 Lidocaine 140-65-8, Pramoxine 141-78-6, Ethyl acetate, biological  
 studies 499-67-2, Proparacaine 564-25-0, Doxycycline 616-45-5,  
 2-Pyrrolidone 721-50-6, Prilocaine 872-50-4, N-Methylpyrrolidone,  
 biological studies 5104-49-4, Flurbiprofen 7440-66-6, Zinc, biological  
 studies 9005-49-6, Heparin, biological studies 10103-46-5, Calcium  
 phosphate 15307-86-5, Diclofenac 16110-51-3, Cromolyn 22204-53-1,  
 Naproxen 27262-47-1, Levobupivacaine 31692-85-0, Glycofurool  
 36637-18-0, Etidocaine 38396-39-3, Bupivacaine 40391-99-9  
 66376-36-1, Alendronate 75330-75-5, Lovastatin 79902-63-9, Simvastatin  
 81093-37-0, Pravastatin 84057-95-4, Ropivacaine 93957-54-1,  
 Fluvastatin 105462-24-6, Risedronic acid 106266-06-2, Risperidone  
 114084-78-5, Ibandronate 118072-93-8 132539-06-1, Olanzapine  
 134523-00-5, Atorvastatin 145599-86-6, Cerivastatin  
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (high viscosity liquid controlled drug delivery system and medical or  
 surgical device)

L7 ANSWER 16 OF 18 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 2003:396751 CAPLUS <<LOGINID::20080117>>  
 DOCUMENT NUMBER: 138:390977  
 TITLE: Catheter injectable depot compositions containing  
 polymers  
 INVENTOR(S): Chen, Guohua; Houston, Paul Ricky; Kleiner, Lothar  
 Walther; Wright, Jeremy Corwin  
 PATENT ASSIGNEE(S): Alza Corporation, USA  
 SOURCE: PCT Int. Appl., 115 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 3  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003041757	A2	20030522	WO 2002-US36716	20021114
WO 2003041757	A3	20030912		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,  
 CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,

	GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW		
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG		
CA 2467239	A1 20030522	CA 2002-2467239	20021114
AU 2002359407	A1 20030526	AU 2002-359407	20021114
US 2003180364	A1 20030925	US 2002-295603	20021114
US 2004024069	A1 20040205	US 2002-295814	20021114
BR 2002006987	A 20040210	BR 2002-6987	20021114
CA 2494342	A1 20040212	CA 2002-2494342	20021114
WO 2004012703	A1 20040212	WO 2002-US36538	20021114
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW		
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG		
AU 2002359397	A1 20040223	AU 2002-359397	20021114
EP 1446101	A2 20040818	EP 2002-793942	20021114
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK		
EP 1526835	A1 20050504	EP 2002-793932	20021114
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK		
BR 2002015843	A 20050607	BR 2002-15843	20021114
JP 2005519873	T 20050707	JP 2003-543644	20021114
CN 1668276	A 20050914	CN 2002-829641	20021114
JP 2006503004	T 20060126	JP 2004-525951	20021114
CN 1972665	A 20070530	CN 2002-826726	20021114
NZ 533436	A 20071026	NZ 2002-533436	20021114
NZ 537955	A 20071026	NZ 2002-537955	20021114
NO 2003003178	A 20030904	NO 2003-3178	20030711
MX 2004PA04665	A 20040910	MX 2004-PA4665	20040514
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NO 2005001029	A 20050225	NO 2005-1029	20050225
IN 2005KN00294	A 20060106	IN 2005-KN294	20050228
PRIORITY APPLN. INFO.:		US 2001-336307P	P 20011114
		US 2002-399882P	P 20020731
		WO 2002-US36538	W 20021114
		WO 2002-US36716	W 20021114

OTHER SOURCE(S): MARPAT 138:390977  
 AB Catheter injectable depot compns. are provided that include a bioerodible, biocompatible polymer, a solvent having miscibility in water of ≤7% at 25°, in an amount effective to plasticize the polymer and form a gel therewith, a thixotropic agent, and a beneficial agent. The solvent comprises an aromatic alc., an ester of an aromatic acid, an aromatic ketone,

or

mixts. thereof. The compns. are have substantially improved the shear thinning behavior and reduced injection force, rendering the compns. readily implanted beneath a patient body surface by injection. A vehicle

comprising 50% Resomer RG502 and 50% solvent (benzyl alc.) was prepared. Significant shear thinning behavior was observed when benzyl alc. was used as the solvent in contrast to formulations using benzyl benzoate.

- IT Antibodies and Immunoglobulins  
Enzymes, biological studies  
Glycoproteins  
Growth factors, animal  
Hormones, animal, biological studies  
Interferons  
Interleukins  
Lipoproteins  
Nucleoproteins  
Peptides, biological studies  
Platelet-derived growth factors  
Polyamines  
Polyanhydrides  
Polycarbonates, biological studies  
Polymers, biological studies  
Polynucleotides  
Polyoxalkylenes, biological studies  
Polyoxymethylenes, biological studies  
Polyphosphazenes  
Polysaccharides, biological studies  
Polyurethanes, biological studies  
Proteins  
Steroids, biological studies  
Transforming growth factors  
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(catheter injectable depot compns. containing polymers)
- IT 65-85-0D, Benzoic acid, aralkyl esters 93-89-0, Ethyl benzoate  
100-51-6, Benzyl alcohol, biological studies 120-51-4, Benzyl benzoate 1398-61-4, Chitin 9002-72-6, Growth hormone 9003-39-8  
, Polyvinylpyrrolidone 9004-61-9, Hyaluronic acid 9012-76-4, Chitosan 11096-26-7, Erythropoietin 18010-40-7, Bupivacaine hydrochloride 24980-41-4, Polycaprolactone 25248-42-4, Polycaprolactone 25322-68-3, Polyethylene glycol 26009-03-0, Polyglycolide 26023-30-3, Poly[oxy(1-methyl-2-oxo-1,2-ethanediyl)] 26202-08-4, Polyglycolide 26680-10-4, Polylactide 26780-50-7, Glycolide-lactide copolymer 34346-01-5, Resomer RG502 61912-98-9, IGF 62031-54-3, FGF 62229-50-9, EGF 62683-29-8, Colony stimulating factor 78644-42-5, Poly(malic acid) 78666-19-0, Poly(malic acid), SRU 81627-83-0, Macrophage colony stimulating factor 83869-56-1, GMCSF 127464-60-2, Vascular endothelial growth factor 143011-72-7, Granulocyte colony stimulating factor 250740-90-0, Angiopoietin 352423-07-5, Placenta growth factor  
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(catheter injectable depot compns. containing polymers)

L7 ANSWER 17 OF 18 CAPLUS COPYRIGHT 2008 ACS on STN  
ACCESSION NUMBER: 2002:184876 CAPLUS <<LOGINID::20080117>>  
DOCUMENT NUMBER: 136:236849  
TITLE: Polymer-based sustained release particle dispersions  
INVENTOR(S): Bodmeier, Roland  
PATENT ASSIGNEE(S): Germany  
SOURCE: PCT Int. Appl., 27 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: German  
FAMILY ACC. NUM. COUNT: 1

## PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002019988	A2	20020314	WO 2001-DE3438	20010904
WO 2002019988	A3	20020627		
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
DE 10044545	A1	20020404	DE 2000-10044545	20000905
AU 200191627	A	20020322	AU 2001-91627	20010904
EP 1317254	A2	20030611	EP 2001-971697	20010904
EP 1317254	B1	20070228		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
AT 355051	T	20060315	AT 2001-971697	20010904
ES 2283433	T3	20071101	ES 2001-1971697	20010904
US 2003152634	A1	20030814	US 2003-378733	20030304
PRIORITY APPLN. INFO.:			DE 2000-10044545	A 20000905
			WO 2001-DE3438	W 20010904

AB The invention relates to sustained release preps. that can be advantageously used as medicaments, plant protecting agents, in food or other products. The invention especially relates to liquid preps. in which sustained release particles are dispersed. The inventive preps. are available in the form of single-dose or multi-dose preps. and as such are produced from liquid preproducts. The invention further relates to kits and methods for producing the preps. and to the preproducts thereof. Thus, a solution of poly(DL-lactide-co-glycolide) in EtOAc was mixed with an aqueous phase containing Tween-80 of Pluronic F68, CMC-sodium. The particles formed were dispersed in the aqueous phase.

IT Castor oil  
 Cottonseed oil  
 Diglycerides  
 Fats and Glyceridic oils, biological studies  
 Glycerides, biological studies  
 Growth factors, animal  
 Hormones, animal, biological studies  
 Interferons  
 Lipids, biological studies  
 Monoglycerides  
 Oligonucleotides  
 Olive oil  
 Paraffin oils  
 Peptides, biological studies  
 Polyamines  
 Polyanhydrides  
 Polyesters, biological studies  
 Polymers, biological studies  
 Polyoxalkylenes, biological studies  
 Polyoxymethylenes, biological studies  
 Polyphosphazenes  
 Polysaccharides, biological studies  
 Polysiloxanes, biological studies  
 Polyurethanes, biological studies

Proteins

Proteins

Safflower oil

Soybean oil

Waxes

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(polymer-based sustained release particle dispersions)

IT 50-21-5, Lactic acid, uses 56-81-5, Glycerol, uses 57-55-6, Propylene glycol, uses 60-01-5, Tributyrin 64-17-5, Ethanol, uses 64-19-7, Acetic acid, uses 67-63-0, IsoPropanol, uses 67-64-1, Acetone, uses 68-12-2, DMF, uses 71-23-8, 1-Propanol, uses 71-36-3, Butanol, uses 71-41-0, Pentanol, uses 77-92-9D, Citric acid, esters 77-93-0, Triethyl citrate 78-93-3, Methyl ethyl ketone, uses 79-20-9 88-99-3D, Phthalic acid, esters 97-64-3, Ethyl lactate 100-51-6, Benzyl alcohol, uses 100-79-8, Solketal 102-76-1, Triacetin 105-54-4, Ethyl butyrate 105-60-2, Caprolactam, uses 108-32-7, Propylene carbonate 109-94-4, Ethyl formate 109-99-9, THF, uses 110-27-0, Isopropyl myristate 111-15-9, 2-Ethoxyethyl acetate 112-80-1, Oleic acid, uses 120-51-4, Benzyl benzoate 127-19-5, DMA 141-78-6, EtOAc, uses 616-45-5, 2-Pyrrolidone 872-50-4, N-Methyl-2-Pyrrolidone, uses 31692-85-0, Glycofurool

RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)

(polymer-based sustained release particle dispersions)

IT 79-10-7D, Acrylic acid, esters, polymers 111-03-5, Glyceryl monooleate 111-62-6, Ethyl oleate 1398-61-4, Chitin 9003-11-6 9003-39-8, PVP 9004-34-6D, Cellulose, derivs. 9004-35-7, Cellulose acetate 9004-38-0, Cellulose acetate phthalate 9004-57-3, Ethyl cellulose 9004-65-3, HPMC 9005-38-3, Sodium alginate 9012-76-4, Chitosan 24980-41-4, Polycaprolactone 25248-42-4, Polycaprolactone 25322-68-3, Polyethylene glycol 26009-03-0, Polyglycolide 26023-30-3, Poly[oxy(1-methyl-2-oxo-1,2-ethanediyl)] 26063-00-3, Poly(hydroxybutyrate) 26202-08-4, Polyglycolide 26680-10-4, Polylactide 26744-04-7 67291-18-3, Poly(3-hydroxyvaleric acid), sru 83120-66-5, Poly(3-hydroxyvaleric acid) 207986-05-8, Glycolide-lactide-polyethylene glycol block copolymer

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(polymer-based sustained release particle dispersions)